

NOTES ON MESEMBRYANTHEMUM AND ALLIED GENERA

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Sphalmanthus baylissii L. Bol. sp. nov. (*Eusphalmanthi*).—Plantae 2 visae, ferae erectae, ut videtur, altera inter frutices intertexta, ad 22 cm. altae; radix incrassata,* parte superiore tantum visa, 6 cm. longa, ad 2.3 cm. diam.; caulis apice ad 1.5 cm. diam.; rami primarii lignei, pro sectione rigidi, 4—8 mm. diam., secundarii etiam rigidi, ad 2 mm. diam., internodiis 1—3.5 cm. longis; ramuli ultimi steriles ad 10-foliati, floriferi 2—3-foliati; partes herbaceae inconspicue papillatae, papillis vix nitentibus, saepius rotundis; folia opposita vel in ramulis floriferis tantum alterna pauperataque, diu suberecta, supra plana, e medio superne angustata, acuta vel acuminata, dorso rotundata, lat. visa superne angustata, acuta vel obtusa, subglauce viridia, ad 1.7 cm. longa, medio ad 2.5 mm. lata diametroque, interdum persistentia demumque subspinescentia; flores diurni; pedunculi superne ampliati, 4—8 mm. longi; receptaculum obconicum vel globose obconicum, 5—6 mm. longum, ad 7 mm. diam.; calycis tubus 3—4 mm. longus, segmentis 5, e parum supra basim superne angustatis, basi 4—5 mm. latis, exterioribus acutis vel subobtusis, ad 1.4 cm. longis, interioribus superne acute longeque subulatis, late marginatis, 1—1.2 cm. longis; corolla ad 1.7 cm. longa cum tubo 3 mm. longo, segmentis 3-seriatis, apice rotundatis, salmoneis, 0.5—0.75 mm. latis; staminodia pauca, 8—12 mm. longa; filamenta ca. 9-seriata, rubre rosea, 1.5—9 mm. longa, antheris pollineque aureis; nectaria basim loculi attingentia; ovarium e nectariis gradatim ad 1.5 mm. elevatum, lobis acute compressis; stigmata 5, subgracilia, superne angustata, ad 1.75 mm. longa.

Cape Province: Namaqualand; "5 miles from Springbok on the Pofadder Rd.", Nov. 1962, *R. D. Bayliss* 920.

Conophytum ursprungianum Tisch. var. **stayneri** L. Bol. var. nov.—Caespitosum glabrum; corpuscula florentia 6—8 mm. longa, 6—7 mm. lata, 8—12 mm. diam., lateraliter visa late obconica, supra visa fere rotunda vel ovalia, glauce viridia, apice leviter convexo, conspicue diverseque punctato, punctis leviter elevatis, politis, saturate viridibus vel atro purpureis, nunc

*Mr. J. Rourke, at my request, has kindly examined the structure of this root and states that: "It consists of more or less concentric rings of xylem (the woody fibre-bearing tissue), in between which are rather broader bands of parenchyma cells which form the storage-tissue. It therefore cannot be correctly called a tuber, but rather be described as a swollen tap root modified for starch-storage by the development of soft parenchymatous tissue." This description could probably be applied to the swollen roots of many other species in this genus.

sparsis, nunc crebris, saepe approximatis vel coalescentibus lineasque breves formantibus, saepe os cingentibus; vaginae persistentes inferne papyraceae, superne subpergamentaceae, rubre brunneae, senectae atratae; flores 8 visi, diurni; pedunculus 3—6 mm. longus, prope basim bracteatus, bracteis 2—3 mm. longis, membranaceis vel nervo medio herbaceo, lobis papillatis, tubum aequantibus, sinu lato; receptaculum 1.5—2 mm. longum, ad 2 mm. diam.; calyx herbaceus, viridis, deinde rubre brunneus, 5—6 mm. longus, parte infima in corpusculo inclusa, tubo 2—4 mm. longo, segmentis 4—5, obtusis, omnibus $\pm$ marginatis, 1.5—2.5 mm. longis; corolla saepius 1.6 cm. longa, tubo pallido 6—8 mm., vel demum ad 9 mm., longo, segmentis 17—25, 3—4-seriatis, roseis, exterioribus inferne non, vel leviter, angustatis, obtusis, interioribus paucis acutis; stamina 16—23, 3—4-seriata, e prope medium tubi orientia, antheris pollineque stramineis; discus e ca. 10 segmentis subtruncatis compositus; ovarium circa marginem concavum, medio conice elevatum, altitudinem disci aequans vel leviter excedens; stylus cum stigmatibus 4 ad 3 mm. longus, stigmata aequans vel paulo brevior.

Cape Province: in dit. Ceres; Skurwekop, Koude Bokkeveld, "34 miles N. of Ceres on the Citrusdal Road, growing in vertical rock-crevices in Table Mountain sandstone," Dec. 1961, *F. J. Stayner*. Karoo Garden 990/61. Fl. Mart.—Apr. 1962.

Conophytum anomalum L. Bol. sp. nov. (*Derenbergia-Oviger*).—Caespitosum glabrum; corpuscula lateraliter visa piriformia vel elongate piriformia, ecarinata, lateribus superne convexis, 1—2 cm. longa, prope apicem latissima, 6—9 mm. lata, ad 7—10 mm. diam., lobis 0.5—1 mm. longis, apice saepe inconspicue sordide purpureo notatis, parte pellucida inconspicua, subquadrata, per margines loborum percurrente; vagina persistens anni prioris pergamentacea, pallide brunnea, in dimidio inferiore polita costata, in superiore rugosa; flores 4 visi; pedunculi 6—9 mm. longi, bracteis 2 mm. a basi positae, valde herbaceis, obtusis ecarinatis, ad 4 mm. longis cum tubo 2.5 mm. longo; receptaculum 1.5 mm. longum, 2 mm. diam.; calyx 8—9 mm. longus, tubo ad 6 mm. longo, lobis obtusis, 1.5—2.5 mm. longis; corolla 1.7—2.4 cm. longa, tubo albo, 7—10 mm. longo, basi 1 mm., apice 2 mm., diam., segmentis 3-seriatis, inferne leviter angustatis, obtusis vel subacutis, luteis, parum supra basim orientia, alba, antheris filamenta ca. 6-seriata, e parum supra basim orientia, alba, antheris pollineque primum pallide luteis; discus inconspicuus, vix crenatus; ovarium conice ad 0.75 mm. elevatum, lobis sat acute compressis; stylus cum stigmatibus 8—11 mm. longus, stylus stigmata aequans vel ea excedens; stigmata 6 itaque anomala in flore cum 5 segmentis calycis.

Cape Province: Namaqualand; Kleinsee, prope Grootmist, *Bayliss* et *Hardy* 1163. Fl. Feb. 1963. N.B.G. 1040/62.

Conophytum vanzylii Lavis (*Cataphracta*) forma. A forma typica tubo corollae albo, segmentis pallidissime roseis, vel supra fere albis, infra pallidissime roseis, vel pallide salmoneis, vel roseis, vel albidis, vel pallidissime luteis.

Cape Province: Bushmanland, Pofadder, *H. A. Horn*. N.B.G. 238/62. Fl. Maio 1962.

Psilocaulon baylissii L. Bol. sp. nov.—Plantae 2 visae, ferae erectae glabrae, 13—24 cm. altae; caulis abbreviatus, ramos primarios crebros ca. 10 ferens, ad 23 cm. longis, 4—5 mm. diam., nodis constrictis, internodiis 1—25 cm. longis; ramuli saepissime alterne producti, ad 12 cm. longi, ultimi floriferi 1—3.5 cm. longi, ca. 3—10-fl.; partes herbaceae (foliis siccis tantum visis) rubide brunneae, minute punctatae, itaque subasperulae, punctis politis approximatis interdumque lineas formantibus; flores inter minimos in genere; pedunculi 1—3 mm. longi, in receptaculum gradatim transeuntes; receptaculum subobconicum, ad 2.5 mm. longum, ad 3 mm. diam.; sepala 5, acuta vel acuminata, 2.5—3 mm. longa, basi 1—2 mm. lata; petala 2-seriata laxa, basi brevissime coalita, inferne non angustata, obtusa vel interiora acuta, rubre rosea, in staminodia transeuntia, 3—5 mm. longa, 0.25—0.75 mm. lata; staminodia acuminata hyalina, interdum obscure lacerulata, stamina excedentia, ad 1 mm. lata; filamenta ca. 3-seriata, alba, antheris pollineque pallide stramineis; ovarium conspicue punctatum, ad 1.25 mm. elevatum, lobis inconspicuis, obtuse compressis; stigmata 5, gracilia, superne angustata, rubra, 1.5—2 mm. longa.

Cape Province: Namaqualand; "20 miles from Grootmist on the road to Port Nolloth," Nov. 1962, *R. D. Bayliss* 988.

Psilocaulon herrei L. Bol. sp. nov.—Planta 1 visa, inter gracillimas in genere, culta, diffuse copioseque ramosa, glabra; caulis basi 5 mm. diam.; rami patentes vel erecti, primarii rigidi lignosique, superne cum ramulis tantum herbacei, ad 38 cm. longi, nodis inferioribus non constrictis, superioribus plus minusve constrictis, internodiis 1—2.5 cm. longis, 1—2 mm. diam.; ramuli alterne producti, seniores 9—15 cm. longi, internodiis ad 2 cm., vel in junioribus 2—5 mm., longis, ultimi floriferi cum floribus 2—4 cm. longi; partes herbaceae virides (an ob culturam?), levissimae; folia immatura tantum visa, erecta acuta, dorso rotundata, sicca ad 1.6 cm. longa; flores inter minimos in genere, in sole pleno expansi; pedunculi in receptaculum gradatim transeuntes, 5—10 mm. longi; receptaculum subclavatum, ad 2.5 mm. longum diametroque; sepala 5, exteriora primum superne incurvata obtusa, ad 0.5 mm. diam., demum submarcescentia, acuta vel acuminata, 4—5 mm. longa, basi 1.5—2 mm. lata, interiora acuta vel acuminata, late marginata, 3—4 mm. longa, basi 1—1.5 mm. lata; petala 2-seriata, saepe inferne ex infra medium leviter angustata, obtusa vel emarginata, purpureo rosea, basi alba, saepius ad 5 mm.

longa, 0.5—0.75 mm. lata; staminodia hyalina, obtusa vel acuta, inferne pallide rosea, apicem versus inconspicue lacerulata, petalis leviter angustiora, stamina subaequantia; filamenta 3-seriata, alba vel rosea, ad 3 mm. longa, antheris pollineque pallide luteis; ovarium ad 1.25 mm. elevatum, lobis sub-obtuse compressis; stigmata 5, alba, 2.5 mm. longa.

Cape Province: in dit. Vanrhynsdorp; Platbakkies, Aug. 1961, *H. Herre*. S.U.G. 14675. Fl. Dec. 1962.

***Ruschia muricata* L. Bol. forma.**—A forma typica pedunculis exsertis, ad 5 mm. longis, partibus ceteris omnibus minoribus, petalis purpureo roseis, differt.

Cape Province: in dit. Kenhardt; Vanwyksvlei, "on the border of a salt pan," *F. J. Stayner*. Karoo Garden 741/62. Fl. Nov. 1962.

The following notes were made by Mr. Stayner, describing the manner in which these plants "adapted themselves to such a peculiar environment. In the shallow top layer of soil there were a few horizontal surface roots. The next 4—6 inches consisted of pure crumbly (high quality) gypsum through which a robust tap-root, without rootlets, penetrated. Then followed a layer of reddish subsoil upon the surface of which the rather long tuberous rootlets were spread, penetrating very little indeed. I consider they are not covered by salt water at any time."

***Ruschia ebracteata* L. Bol.**—A portion of the type-material of this species, described in this Journal in Oct. 1962 as having 3-nate flowers, flowered again during February, producing an inflorescence consisting of 5 fully developed flowers and 2 buds, with all the peduncles ebracteate.

***Delosperma waterbergense* L. Bol. sp. nov.**—Planta 1 visa, culta erecta glabra, 10 cm. alta; radix incrassata; partes herbaceae minute papillatae, papillis rotundatis, vix nitentibus, virides; folia ascendunt, supra visa e medio superne angustata, acuta, leviter concava vel demum plana, dorso rotundata, lat. visa superne angustata, acuta, 2.5—3.4 cm. longa cum vagina 1—2 mm. longa, medio 3—4 mm. lata diametroque; flores solitarii ebracteati meridiani, 3—4 cm. diam.; pedunculi superne ampliati, in receptaculum subclavatum, prope apicem leviter constrictum, deinde ampliatus, 4—5 mm. longum, 4—6 mm. diam., gradatim transeuntes, 6—10 mm., vel demum ad 16 mm., longi; sepala 5 vel rarissime 6, exteriora fere e basi complanato superne angustata foliiformiaque, acuta vel acuminata, 8—10 mm. longa, basi 2—3 mm. lata, interiora ample marginata, 5—8 mm. longa, 2 intima apice subulata, subula patente; petala roseo purpurea, exteriora 2—3-seriata, parum inaequilonga, saepius inferne leviter angustata, obtusa vel saepius subtruncata obscureque emarginata,

1.1—1.7 cm. longa, apice 1—1.5 mm., vel rare ad 2 mm., lata, interiora breviora pauca, intima acuta, e medio recurva, in staminodia transeuntia; staminodia petaloidea, inferne ad stamina appressa saturateque rosea, superne valde recurva pallidaque, extima stamina bene excedentia, intima ea aequantia; filamenta 5—6-seriata, exteriora inferne rosea, ad 5 mm. longa, intima prope medium dense papillata, pallida, antheris pollineque albidis; glandulae humiles subdistantes; ovarii lobi fere e glandulis erecti, subsemiglobosi, ad 0.75 mm. elevati.

Transvaal: in dit. Waterberg, Spruitkloof, Feb. 1959, *L. C. C. Liebenberg*. S.U.G. 14475. Fl. Sept. 1962. N.B.G. 884/62. Fl. Nov.—Feb. 1962—1963.

Polymita diutina (L. Bol.) L. Bol. comb. nov.—*Ruschia diutina* L. Bol. Mes. II: 356 (1932).

Octopoma calycinum (L. Bol.) L. Bol. comb. nov.—*Ruschia calycina* L. Bol. l.c. 47 (1929).

Octopoma connatum (L. Bol.) L. Bol. comb. nov.—*Ruschia connata* L. Bol. l.c. I: 139 (1928).

Octopoma subglobosum (L. Bol.) L. Bol. comb. nov.—*Ruschia subglobosa* L. Bol. l.c. 140 (1928).—Staminodia nulla.

Correction

Vol. XXVII: 55, line 31. For conica read obconica.

NOTE.—The type specimens of all new species described in this paper are in the Bolus Herbarium, University of Cape Town, Rondebosch.

(To be continued.)